

overall group (33% vs. 20%;  $p < 0.0001$ ) and versus the atorvastatin group (34% vs. 24%;  $p < 0.0001$ ). **CONCLUSIONS:** Propensity score-matched analysis of high-risk patients initiating statins indicated that rosuvastatin was significantly more likely to reduce LDL-C compared with all other statins grouped together and compared with atorvastatin alone in this real world patient population.

#### PCV17

##### SYSTEMATIC REVIEW AND NETWORK META-ANALYSIS OF ALL AGENTS FOR STROKE PREVENTION IN PATIENTS WITH ATRIAL FIBRILLATION

Tawfik A<sup>1</sup>, Pechlivanoglou P<sup>2</sup>, Bielecki J<sup>2</sup>, Krahn MD<sup>2</sup>

<sup>1</sup>University of Toronto, Toronto, ON, Canada, <sup>2</sup>Toronto Health Economics and Technology Assessment (THETA) Collaborative, Toronto, ON, Canada

**OBJECTIVES:** To compare the relative effectiveness and safety of all stroke prevention agents in patients with atrial fibrillation (AF) through a systematic review and network meta-analyses. **METHODS:** A search of MEDLINE, EMBASE, and CENTRAL was conducted (through December 2013) to identify Phase III randomized controlled trials of AF patients, comparing any two of the following agents: placebo, aspirin, aspirin and clopidogrel combination therapy (A+C), adjusted-dose warfarin (target INR 2.0-3.0), dabigatran (110 mg and 150 mg), rivaroxaban, apixaban, and edoxaban (high and low doses). We conducted fixed-effects Bayesian network meta-analyses to generate relative effectiveness estimates for the outcomes of interest (all stroke, ischemic stroke, myocardial infarction, overall mortality, major bleeding, intracranial hemorrhage, and fatal bleeding). For each outcome, agents were ranked according to their likelihood of being the best option. **RESULTS:** We identified 12 studies, comprising 81,771 patients. Compared to warfarin, dabigatran 150 mg (RR 0.65, 95% CI 0.52-0.82) and apixaban (RR 0.80, 95% CI 0.66-0.96) reduced the risk of all strokes. Dabigatran 150 mg was also more effective than warfarin at reducing ischemic stroke risk (RR 0.77, 95% CI 0.59 - 0.99). All anticoagulants were more effective than A+C, aspirin and placebo at reducing the risk of ischemic and all strokes. All treatments were associated with a lower risk of major bleeding than warfarin, except for dabigatran 150 mg, rivaroxaban, A+C, and aspirin. Dabigatran 150 mg was most likely to be ranked best at reducing ischemic stroke risk, and low-dose edoxaban as best at reducing major bleeding risk. **CONCLUSIONS:** Anticoagulants effectively reduce the risk of ischemic and all strokes in AF patients, and are more effective than antiplatelets. Some novel anticoagulants are associated with lower stroke and/or major bleeding risk than warfarin. In addition to a drug's safety and effectiveness, individual treatment should consider the patient's underlying stroke and bleeding risk profile.

#### PCV18

##### COMPARATIVE EFFICACY OF NEW ORAL ANTICOAGULANTS FOR STROKE PREVENTION IN ATRIAL FIBRILLATION AMONG PATIENTS WITH PRIOR STROKE OR SYSTEMIC EMBOLISM

Cope S<sup>1</sup>, Keen A<sup>2</sup>, Chen M<sup>2</sup>, Bergrath E<sup>2</sup>

<sup>1</sup>Mapi, Toronto, ON, Canada, <sup>2</sup>Mapi, Boston, MA, USA

**OBJECTIVES:** Patients with atrial fibrillation (AF) and a previous stroke or transient ischaemic attack (TIA) have a high risk of stroke and may have a different baseline risk than patients without previous stroke or TIA, which may act as a treatment effect modifier. Therefore, the comparative efficacy of new oral anticoagulants (NOACs) in terms of stroke or systemic embolism (SE) was assessed for the subgroup of patients with a previous stroke or TIA. **METHODS:** A Bayesian network meta-analysis (NMA) was performed for patients with previous stroke or TIA from three pivotal randomized controlled trials: ARISTOTLE, RE-LY, and ROCKET-AF, which compared apixaban, dabigatran, and rivaroxaban to warfarin, respectively. Parametric survival functions were used to model the hazard ratios (HR) over time for the compared interventions, and the difference in the shape and scale parameters of these functions was synthesized and indirectly compared. Results were compared to an analysis of constant HRs as well as to previous NMAs for this subgroup. **RESULTS:** The time-varying HRs for the treatments versus warfarin suggest that each NOAC is at least as efficacious as warfarin with respect to stroke and SE. The HR for dabigatran 150mg was fairly constant over time (range: 0.80-0.68). The HR for dabigatran 110mg decreased slightly over time (range: 1.82-0.40), whereas the HRs increased slightly over time for rivaroxaban (range: 0.61-1.34) and apixaban (range: 0.62-0.94). **CONCLUSIONS:** Based on the NMA of stroke or SE among patients with AF and a prior stroke or TIA, dabigatran 150mg and apixaban are expected to be comparable to warfarin; dabigatran 110mg is expected to be comparable to warfarin for the first 16 months and more efficacious up until 30 months; rivaroxaban is expected to be more efficacious than warfarin for the first 4 months, and comparable to warfarin thereafter.

#### PCV19

##### A NETWORK META-ANALYSIS EVALUATING THE CUMULATIVE HAZARD RATE OF STROKE OR SYSTEMIC EMBOLISM FOR NEW ORAL ANTICOAGULANTS IN STROKE PREVENTION FOR ATRIAL FIBRILLATION PATIENTS

Cope S<sup>1</sup>, Keen A<sup>2</sup>, Bergrath E<sup>2</sup>, Chen M<sup>2</sup>

<sup>1</sup>Mapi, Toronto, ON, Canada, <sup>2</sup>Mapi, Boston, MA, USA

**OBJECTIVES:** In order to indirectly compare new oral anticoagulants (NOACs) for patients with atrial fibrillation (AF), several network meta-analyses (NMAs) have compared the number of patients with stroke or systemic embolism (SE) at study end. The aim of the present analysis was to assess the comparative efficacy of NOACs over the entire duration of the studies, including changes in comparative efficacy over time, using the published cumulative hazard rates. **METHODS:** A Bayesian NMA was performed using a fractional polynomial model synthesizing data from three pivotal randomized controlled trials: ARISTOTLE, RE-LY, and ROCKET-AF, which evaluated apixaban, dabigatran, and rivaroxaban, respectively, versus warfarin. Parametric survival functions were used to model the hazard rate over time for the compared interventions and the difference in the shape and scale parameters of these functions was synthesized and indirectly compared. The efficacy of NOACs was evaluated and compared to constant HRs from previ-

ous NMAs. **RESULTS:** The time-varying hazard ratios (HRs) versus warfarin suggest that each NOAC is at least as efficacious as warfarin with respect to stroke and SE. The HR for dabigatran 110mg was fairly constant over time (range: 0.92-0.90). The HR for dabigatran 150mg decreased slightly over time (range: 0.78-0.56), whereas the HRs increased slightly over time for rivaroxaban (range: 0.59-1.17) and apixaban (range: 0.55-1.11). The HRs for each treatment comparison versus warfarin were transformed into cumulative hazard rates per treatment. **CONCLUSIONS:** Based on the NMA of stroke or SE among the intention to treat population with AF, dabigatran 110mg is expected to be comparable to warfarin; dabigatran 150mg is expected to be comparable to warfarin for the first 5 months and more efficacious up until 30 months; rivaroxaban and apixaban are expected to be more efficacious than warfarin for the first 11 and 12 months, respectively, and comparable to warfarin thereafter.

#### PCV20

##### THE EFFECT OF LOW-DENSITY LIPOPROTEIN CHOLESTEROL GOAL ATTAINMENT ON CARDIOVASCULAR OUTCOMES IN PATIENTS WITH ACUTE CORONARY SYNDROME: A REAL WORLD PRACTICE IN THAILAND

Chinwong D<sup>1</sup>, Patumanond J<sup>2</sup>, Chinwong S<sup>1</sup>, Gunaparn S<sup>1</sup>, Phrommintikul A<sup>1</sup>

<sup>1</sup>Chiang Mai University, Chiang Mai, Thailand, <sup>2</sup>Thammasat University at Rangsit, Patumtanee, Thailand

**OBJECTIVES:** Despite the known benefit of low-density lipoprotein cholesterol (LDL-C) goal attainment of less than 70 mg/dL in a reduced risk of cardiovascular events, its effectiveness in acute coronary syndrome patients in Thailand is limited. This study aimed to assess the effect of LDL-C goal attainment on first composite cardiovascular outcomes. **METHODS:** A retrospective cohort study was conducted using medical charts of patients who were hospitalized for acute coronary syndrome and were treated with statins at a tertiary care hospital in Thailand between 2009 and 2012. After admission, patients were followed from the date of LDL-C goal assessment until the first event of composite cardiovascular outcomes (myocardial infarction, stroke, death). Median follow-up time was 544 days (interquartile range: 224-887 days). Cox proportional hazard models were used to determine the effect of LDL-C goal attainment on the cardiovascular outcomes. **RESULTS:** A total of 405 patients were included. Mean age was 65 years (60% males). Twenty-seven percent of the patients attained a LDL-C goal of <70 mg/dL, 38% had LDL-C between 70 and 99 mg/dL and 35 % had LDL-C  $\geq$  100 mg/dL. Forty-six patients experienced a composite cardiovascular outcome. Patients achieving a LDL-C of <70 mg/dL was associated with a lower composite cardiovascular outcome compared to patients with a LDL-C  $\geq$  100 mg/dL (adjusted HR=0.41; 95% CI= 0.18 - 0.93; p-value=0.034). Patients with a LDL-C between 70-99 mg/dL had a lower composite cardiovascular outcome compared to patients with a LDL-C  $\geq$  100 mg/dL but was not statistically significant (adjusted HR= 0.72; 95%CI= 0.37 - 1.42; p-value=0.346). **CONCLUSIONS:** Acute coronary syndrome patients who received statins and achieved a LDL-C of < 70 mg/dL were more likely to have less cardiovascular outcomes, confirming the data from clinical trials that "the lower LDL-C the better". Improvements in goal attainment for LDL-C are encouraging.

#### PCV21

##### COMPARATIVE EFFECTIVENESS AND SAFETY OF CRYOCATHETER ABLATION VERSUS RADIOFREQUENCY CATHETER ABLATION FOR TACHYARRHYTHMIAS: A SYSTEMATIC REVIEW

Park DA, Lee NR, Park SH, Shin S

National Evidence-based Healthcare Collaborating Agency (NECA), Seoul, South Korea

**OBJECTIVES:** Tachyarrhythmias is a significant burden to a variety of cardiovascular conditions and increased rates of stroke, death. The aim of this study was to critically evaluate the current evidence on the use of cryocatheter ablation (CA) compared with radiofrequency catheter ablation (RFCA) in patients with tachyarrhythmias. **METHODS:** We searched potentially relevant studies using electronic databases such as Ovid-Medline, Ovid-EMBASE, Cochrane library, and two local medical databases through April 2013. Two independent reviewers extracted data from each study using a standardized form. Disagreements between reviewers were resolved by discussion or in consultation with a third reviewer. The quality of the selected studies was assessed using the Cochrane risk of bias for randomized controlled trials (RCTs). A fixed-effects model was used to combine trials and the dichotomous data were presented as relative risk (RR) with 95% confidence intervals (CI). **RESULTS:** A total of 9 RCTs representing 1,202 patients were included. Their methodological quality was mostly poor. In 3 trials of atrial flutter, cryoablation, in comparison with RFCA, did not result in statistically significant difference in freedom from atrial flutter (RR 0.97, 95% CI 0.90-1.05, P=0.43, I<sup>2</sup>=0%). The incidence of freedom from atrial fibrillation was 80% in the cryoablation group compared with 63.3% in the RFCA group; this difference was not significant (RR 1.26, 95% CI 0.91-1.75, P=0.16). In paroxysmal supraventricular tachycardias (PSVT), cryoablation significantly decreased freedom from AVNRT or clinical recurrence (RR 0.95, 95% CI 0.91-0.98, P=0.003, I<sup>2</sup>=0%). Major complications were not reported in the trials and the incidence of complications did not reported significant different. **CONCLUSIONS:** There is limited evidence to confirm the relative advantages and disadvantages of cryoablation versus radiofrequency ablation in patients with tachyarrhythmias. Further rigorous RCTs with long-term follow up that overcome the many limitations of the current evidence are warranted.

#### PCV22

##### META-ANALYSIS OF SAFETY OF DABIGATRAN AND WARFARIN FOR ATRIAL FIBRILLATION

Aggarwal S, Kumar S, Segal J

Novel Health Strategies, Bethesda, MD, USA

**OBJECTIVES:** Atrial fibrillation (AF) is an irregular and often rapid heart rate that commonly causes poor blood flow to the body. Dabigatran and Warfarin have shown safety and efficacy for treatment of AF. The objective of this study was to conduct meta-analysis and present evidence for safety of Dabigatran versus Warfarin for treatment of AF. **METHODS:** For this meta-analysis we included randomized con-